

TRIP REPORT - TOZITNA RIVER
By Carl Hemming

83-1395

AUG 24 1983

HABITAT
REGIONAL OFFICE

DATES: July 6, 1983 - July 13, 1983

PERSONNEL: Joe Webb - Bureau of Land Management (BLM) Fisheries Biologist
Scott Robinson & Laun Buoy - BLM Wildlife Biologists
Carl Hemming - ADF&G, Habitat Biologist

LOGISTICS: Fairbanks to Tanana - Grumman Goose; Tanana to the Tozitna River and return (4 round trips for personnel and gear) - A-Star Helicopter; Tanana to Fairbanks - Bandeirante twin engine aircraft.

The Tozitna River between river mile (RM) 72 and 24 was floated using inflatable rafts.

PURPOSE: To participate in a general resource inventory of the Tozitna River drainage. To gain better information on the distribution of fish and wildlife populations and habitat. Specific goals were to enumerate adult salmon and identify the location and physical properties of spawning habitats within the Tozitna River. To investigate the area near Tozimoran Creek and assess the impacts of mining activity on the Tozitna River.

GENERAL COMMENTS: The area between Fleshlanana Creek (RM 72) and Tozimoran Creek (RM 24) was floated in a six day period. Six to eleven miles were covered each day. The weather conditions were excellent with temperatures in the 70°F to 80°F range for the entire trip. Bright sunlight and generally low water levels made it possible to easily identify adult fish in the section between Fleshlanana Creek and Dagislahna (Dag.) Cr. Below Dag. Cr., the water was stained, slower and generally deeper making observations of fish more difficult.

RESULTS AND DATA:

Tanana C-3 K, Ch, W to
RM 75 ie. 3 mile above
Fleshlana Creek

A. Species Sighted

Arctic Grayling - Thymallus arcticus
Round Whitefish - Prosopium cylindraceum
Longnose sucker - Catostomus catostomus
Slimy sculpin - Cottus cognatus
King salmon - Oncorhynchus tshawytscha
Chum salmon - Oncorhynchus keta

B. Location and Number of Salmon Sighted by River Section:

<u>Section</u>	<u>Chums</u>	<u>Kings</u>
1) RM 72 to 65 Fleshlana Creek - McQueston Creek	0	**5
2) RM 65 to 56 McQueston Creek - 9 miles downstream		13

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<u>Section</u>	<u>Chums</u>	<u>Kings</u>
3) RM 56 to 47 9 miles below McQueston Creek to 1 mile below Crooked Creek	17	32
4) RM 47 to 36 1 mile below Crooked Creek to 5.5 miles below Dajislakhna Creek	*130	35
5) RM 36 to 30 5.5 miles below Dajislakhna Creek to 6 miles downstream	*148	2
6) RM 30 to 24 11.5 miles below Dajislakhna Creek to Tozimoran Creek	11	3
TOTALS	306	90

*Section total includes estimates of larger groups of spawning chum salmon

**Furtherest upstream sighting of king salmon within T.8N., R.20W., Section 2, Tanana C4

C. Physical and Chemical Characteristics

1) Discharge estimate taken 100 yards above the mouth of Fleshlanana Creek within - T8N, R19W, Section 9, Tanana C-3, RM 72, 356c.f.p.s., floating orange method.

356 cfs - correction by

2) Water Chemistry - Same locations as described above.

Temperature: 54°F

Dissolved Oxygen: 10 ppm

ph: 8.0

Total Hardness: 4 gpg

Total Alkalinity: 3 gpg

Turbidity: not measurable

phone call to
Al Townsend 8-25-81

-At RM 36 - 5.5 miles below Dag. Creek confluence

Temperature: 62°F

Dissolved Oxygen: 10 ppm

ph: 7.5 - 8.0

Total Hardness: 3 gpg

Total Alkalinity: 2 gpg

Turbidity: not measurable

-At Tozimoran Creek

Beaver Dam 300' above mouth

Turbidity above dam 50' - 4.8 NTU

Turbidity below dam 50' - 4.5 NTU

Tozitna River 50' downstream from the mouth of Tozimoran Creek -
0.8 NTU

Temperature in Tozimoran Creek 52°F; temperature in Tozitna River
near the mouth of Tozimoran Creek - 61°F

FISH OBSERVATIONS AND GENERAL HABITAT TYPES BY SECTION:

Section #1: RM 72 to 65 exhibits a single and split channel configuration with extensive bars consisting of gravel and large cobbles. Streamside vegetation consisting of white spruce and balsom poplar occurs on cut banks. Willow stands were found back of the bars grading rapidly to open tundra. Riparian habitats were limited to a fairly narrow band along the river. The water level in this section appeared lower than normal based on high water signs and the vegetation line.

Small groups of adult grayling were sighted in the deeper pools. Young of the year grayling were sighted in back water areas. Round whitefish were also noted in this section. Five king salmon were sighted at RM 68. The kings were holding at the tailend of a riffle area in 3' of water, over a rock cobble bottom in a strong current of roughly 3 feet per second.

Section #2: RM 65 to 55 had a split channel configuration with long pools separated by shorter riffle sections (80% pool/20% riffle). Large gravel/cobble bars were common in this section. King salmon were sighted in deep slow moving pools (3 to 8' deep), generally over large gravel/cobble substrates. Numerous grayling were observed shadowing the kings in many of the pools.

Section #3: RM 55 to 47 was very active in terms of recent channel changes. Many large log jams and associated deep scour pools and side sloughs were noted. These deep scour pools provided spawning habitat for king salmon as kings were observed holding in these areas. The furthest upstream sighting of chum salmon occurred in this section near the confluence of Crooked Creek. Chums were found holding in slower pools off cut bank areas.

Section #4: RM 47 to 36 was similar in physical properties and fish presence and abundance to Section #3 downstream to near the confluence of Dag. Creek. From a point just above the Dag Creek confluence chum salmon spawning areas with large (over 50) concentrations of fish were observed. Chums were found spawning in long deep pools over sand/gravel substrate generally congregating along the edge of cut banks. The largest group of spawning chums (estimated 100+ individuals) was sighted in T8N, R23W, Section 13, Tanana C-5. This area is located roughly one mile above the mouth of Dag Creek. Juvenile fish were seen more frequently in the many backwater areas below the Dag. Creek confluence.

The mainstem Tozitna changed character below Dag. Creek, becoming wider, slower and taking on a stained coloration. The mouth of Dag. Creek also represents the most upstream point the river can easily be navigated with a propeller driven boat at the water levels we observed.

Section #5 and #6: RM 36 to 24 was similar in character to that described for Section #4 below Dag. Creek. Large concentrations (50⁺ fish) of spawning chum salmon were sighted in two locations. A group of 50⁺ spawning chums were sighted within T7N, R23W, Section 10 (Tanana C-5). Spawning activity was observed in a deep (4' to 5') slow moving pool over a gravel bottom. The majority of the redds were located along the edge of a cut bank. The second spawning area contained roughly 70⁺ chum salmon. This area was located within T7N, R23W, Section 30 (Tanana C-5). The physical properties of this area were similar to the other chum salmon spawning areas but somewhat shallower (3 to 4' deep).

King salmon sighted in this section of river tended to be moving upstream and not holding. Large schools of longnose suckers were sighted in this section.

WILDLIFE OBSERVATIONS:

Raptors: red tailed hawk - near McQueston Creek
red tailed hawk - 1 mile below Crooked Creek confluence
bald eagle - 1 mile above Dag. Creek confluence - perched in a tall white spruce next to a chum salmon spawning area

Waterfowl: red breasted mergansers - above McQueston Creek
Canada geese - family sighted above McQueston Creek

Big Game: 2 moose - male & female - twin yearlings - 1 mile below Crooked Creek
2 moose - below Tozimoran Creek sighted from the air, feeding in an oxbow off the river
gizzly bear - opposite the mouth of Tozimoran Creek

*BLM has more complete information on wildlife including a comprehensive list of bird observations.

HUMAN USE AND ACCESS:

The furthest upstream sign of human use was a trapping cabin located at RM 57, T8N., R21W., Section 4.

A second larger homestead cabin is located roughly 1 mile above Crooked Creek. This site is active as fish racks were set up, fish were drying and a gill net was fishing. A short gravel bar airstrip is located downstream from this cabin.

An active settlement with an airstrip is located at the confluence of Dag. Creek and the Tozitna River.

Aside from these homestead type settlements the upper portions of the Tozitna appear to be unused by the public.

Access is generally from the village of Tanana by riverboat. A winter trail also connects the village of Tanana with the Tozitna River coming out near Dag. Creek. The two airstrips mentioned earlier are the only other known access points to this area.

LAND STATUS:

The BLM has management authority over the majority of land on the upper river with the exception of trade and manufacturing sites. The lower river, generally below Tozimoran Creek, has been conveyed to Native Village Corporations through provisions of the Alaska Native Claims Settlement Act.

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